

Astrophysics and Black Holes: Black holes, enigmatic cosmic phenomena predicted by Einstein's theory of general relativity, continue to captivate astrophysicists' imaginations. Recent groundbreaking observations, including the first-ever image of a black hole's event horizon captured by the Event Horizon Telescope, provide unprecedented insights into these gravitational behemoths' properties and behaviour. Studying black holes offers opportunities to test fundamental principles of physics under extreme conditions and explore phenomena like gravitational waves, which propagate through spacetime, carrying information about the universe's most cataclysmic events.